The Impact of International Influence on Microbanks' Performance: A Global Survey

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Abstract

Microbanks serve micro-enterprises and poor people with financial services. This study examines how various aspects of international influence affect microbanks' financial and social performance. Grounded in agency theory and resource based theory, we argue that there are multiple ways that the internationalization of microbanks might affect performance. Specifically, we argue that one can distinguish between four sources of such internationalization effects; international initiator, international directorship, international debt, and international affiliation/networks. This study utilizes data from 379 microbanks in 73 developing countries – assessed between 2001 and 2008. We find that the internationalization of microbanks to a large extend enhances social performance, but does not enhance financial performance.

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1. Introduction

Microfinance is the supply of banking services to micro-enterprises and poor families (Helms 2006). Christen et al. (2004) reports that as many as 500 million poor persons benefit from access to savings services, and between 125 million and 150 million clients have an estimated $25 billion in outstanding loans with microfinance providers (Financial Times, 2008). The development enhancing aspects of microfinance was recognized when the Nobel Peace Prize was given to Mohammad Yunus and Grameen Bank in 2006. However, relatively little is known about what drives the performance of microfinance institutions (Cull et al. 2007; Mersland and Strøm, 2009) – or what we label microbanks. Specifically, this study addresses the effects from internationalization on microbanks' performance.

Anecdotal evidence suggests that the microfinance industry is subject to strong cross-border influence from international capital providers (by donors, by lenders, or by equity holders), international knowledge transfers (best practices, policy guidelines, strategic planning, software etc.), and extensive international networks - such as Accion International, Women's World Banking, Finca or Opportunity International. In fact, our data from 379 microbanks in 73 countries shows that as much as 38% of the microbanks have an international initiator, 41% have international commercial debt, 51% have international subsidized debt, 24% have at least one international director[1], and 33% are members of a recognized international network. However, the performance impact of such international influence has not been addressed by existing research. Within the microfinance industry there

[1] An international director is defined as a supervisory board member (non-executive) that is a citizen of different country than the legal home of the microbank.

is often a perception that international influence on microbanks is *"to accelerate innovative domestic market solutions"* (C-GAP 2006, p. viii). This implies that as microbanks develop and mature one should expect that international influence would be reduced (Helms, 2006). Thus, "exit strategies" are often high on international investors' and international donors' agendas, and the construction of national, e.g. non-international, microbanks is by many considered an objective in itself.

Existing research on microfinance has mostly dealt with the impact from accessing banking services, the economics of group lending and policy issues on how to build and regulate an inclusive financial sector (Armendariz de Aghion and Morduch, 2005). Cross-country issues related to the transfer of funds, knowledge sharing, and network access, are new to the literature. We believe decades of international business research can be used to better understand the international economics of microbanks, and the managerial implications of such knowledge.

International business research shows that internationalization tends to produce firms with higher performance (e.g., Morck and Young, 1991; Tallman and Li, 1996; Wagner, 2004), however, after overcoming internationalization barriers. Commonly there are four broad arguments for the high performance of the internationalized firm; (i) economics of scale – especially knowledge (e.g., Dunning, 2000; UNCTAD, 2003), (ii) reduced cross-border agency costs through internalized (within firm) markets (Buckley and Casson, 1976, 1998), (iii) lower cost of capital from international funds (e.g., Stulz, 1999; Bekaert and Harvey, 2000; Hearn et.al, forthcoming; Oxelheim et al., 2001) and (iv) better corporate governance (e.g., Oxelheim and Randøy, 2003; Coffee, 2002). We suggest that internationally influenced microbanks can potentially benefit from the same kind of advantages – after overcoming the liability of a foreign *origin* (similar to the International Business research reference to the "liability of foreignness" of a multinational firm – see Dunning, 1977).

Whereas international business research typically concentrates on multinational firms

reaching "out" from a domestic base, in this study, we focus on the individual microbank entity – as it typically reaches "North" for resources and support from developed countries. This implies that our perspective is one of the "global South": How can a microbank in a developing country benefit from internationalization? The focus of this study is firstly on the *financial* performance of the microbank – being measured in terms of (1) real Return on Assets (ROA)[2], (2) Operational Self-Sufficiency (OSS), and (3) Financial Self-Sufficiency (FSS). We argue that there are inherent close relationships between these indicators – such that we focus on the joint effect of these performance measures. Secondly, since microfinance most commonly has a dual nature, one being financial, and the other developmental, we also include measures for *social* performance– or as it is commonly referred to, outreach. We apply three measures that attempt to combine the multidimensional nature of social performance: (1) outreach to the poorest customers measured in terms of average size of loans, (2) outreach to women as these are considered a main mission of microfinance (Armendariz de Aghion and Morduch, 2005), and (3) outreach to rural areas which is also a major concern in the microfinance industry (Helms, 2006). Specifically, we are interested in how the internationalization influences affect both social and financial performance of the microbank since recent evidence (Hermes et al., forthcoming) has shown that a tradeoff between the financial and the social performance exists. In this paper, we pose the question of whether or not a microbank's international linkages account for a part of this tradeoff. If this is the case, we expect the international explanatory variables to be differently related to the financial and the social performance.

This paper is divided into six parts. Following the introduction, which has reviewed the main motivation for this study, part two focuses on the nature of international influence in the microfinance industry. The presented and tested model of internationalization's affect on

[2] Debt/Equity levels in microbanks differ considerably. Comparison of economic performance is therefore best measured using ROA and not ROE.

microbanks' performance is shown in section three – with explicit hypotheses being put forward. The research methodology and data is presented in section four, and the empirical findings presented in section five. Finally, we present our main conclusions - as well as implications for policy makers - in section six. We also conclude with a discussion of further research, and the inherent limitations of this study.

2. International influence in the microfinance industry

Internationalization is rather extensive in the microfinance industry. There are international conferences (such as the Microcredit Summits and the Inter-American Forum on Microenterprise) and international, web-based, microfinance information platforms. For example, Mix Market (www.mixmarket.org) seeks to facilitate international information exchange between microbanks investors, donors and different service providers. In March 2008 www.mixmarket.org listed 1157 microbanks in 99 countries, 99 international lenders and 165 market facilitators such as rating agencies, networks and support service providers. Besides, the web-based hub www.microfinancegateway.org lists 7250 documents, 446 international consultants, 135 vacant jobs and 40 upcoming events as of May, 2008.

Today all major multilateral development organizations, like the IMF, the World Bank, The Asian Bank, the EU, the UN and the Inter American Development Bank dedicate funding and research to microfinance. Specialized agencies like the Consultative Group to Assist the Poor (www.cgap.org) provide the industry with specific guidelines and issue policy recommendations. The international recognition for microfinance as a development tool culminated with the UN declaring 2005 as the year of Microcredit and the Nobel's peace prize being awarded to Mohammad Yunus and his Grameen Bank in 2006.

Increasingly microfinance is becoming an attractive investment opportunity (Walter and Krauss, 2008). Interestingly, a number of international banks such as Citibank, HSBC, Deutsche Bank, BNP Paribas, ABN Ambro and Barclays are engaged in microfinance

activities and in 2006 held a portfolio in microbanks of more than 500 million US dollars (ING, 2006). For example, international holding companies, such as Procredit Holding with a total portfolio of nearly 400 million invested in 22 national microbanks around the globe, are emerging (Reille and Forster, 2008). Between 2004 and 2006 the total stock of foreign capital investment in microfinance more than tripled to US$ 4 billion, and 40 specialized international investment funds have been established during the last couple of years (Reille and Forster, 2008).

Other examples of international influence are the many networks that provide their members with knowledge and information, such as; FINCA, Opportunity International, and Women's World Banking. Another example of the internationalization of the industry, is the global success of business planning software such as Microfin (www.microfin.com) used in a large number of countries. Another very recent global initiative that has picked up considerable interest is www.mftransparency.org, an international initiative for fair and transparent pricing in the microfinance industry.

Modern microfinance, as pioneered by Mohammad Yunus the founder of Grameen Bank in 1976, was born in a philanthropic development culture. Historically, the focus was on the build-up of local capacity and the gradual exiting of international founders and donors. Still, several in the microfinance community consider international participation in microbanks to be transition phenomena. In their view, the ultimate goal is to build local microbanks as an integrated part of the national financial system – with local owners and focus on relations with domestic stakeholders. This view is articulated by Hendricks (2003), page 78:

> *[..] a bilateral donor project is expected to design a microfinance institution or program, to build the necessary capacity, and, when the project ends, to have established an operation that has developed enough momentum to achieve financial sustainability on its own.*

Thus, to some the inflow of international capital and expertise - increasingly with profit motives - is a threat. Such arguments are commonly based on ideology or politics- and not on empirical facts. So far, few have asked the question to what degree international participation influences microbanks' performance or customer satisfaction. This paper aims at filling this void by bringing in empirical evidence on how international stakeholders influence microbanks' performance.

3. How Internationalization Might Influence Microbanks' Performance

The Model

The ongoing process of internationalizing financial markets offers microbanks greater financial flexibility. This provides a microbank – just like international oriented firms have done previously (e.g., Oxelheim et al, 1998; Stulz, 1999) – with the ability to increase the availability and reduce the cost of capital. However, it requires that the microbank is able to efficiently overcome cross-country information gaps and the ability to monitor/control these international exchanges.

The theoretical foundation for this study comes from agency theory and resource based theory. Agency theory emphasizes that when ownership and management is separate – then incentives and control are needed to induce managers (agents) to maximize profits - or other organizational goals – such as social performance. Specifically, boards play an important monitoring role in order to reduce agency costs in both for-profit and non-profit firms (Fama and Jensen 1983; Dalton et al, 1998; Dalton et al, 1999; Speckbacher 2008). For example, in relation to monitoring the microbank - an international director can take on a special independent role as he/she is less part of vested domestic interests. International debt is another very different governance "mechanism" that can facilitate better monitoring. Such debt can potentially reduce microbanks' agency costs by forcing the microbank to be more

performance oriented.

The resource based theory of the firm (e.g., Barney, 1991) highlights how firm specific resources are the cornerstone of corporate competitiveness. This has also been shown in the context of international business (e.g., Peng, 2001) – and we argue is applicable to microbanks. Furthermore, a key issue is how internationalization affects the microbank's ability to effectively deploy resources. Specifically, past literature (e.g., Hall 1992) has highlighted the importance of resources and capabilities such as; the ability to raise external capital, organizational culture, use of managerial talent, and a good reputation among employees and other stakeholders. In this study, we specifically look at four kinds of resources and capabilities (international initiator, international debt, international board membership, and international network membership), and we argue that microbanks with such resource capabilities will outperform microbanks without such access.

This study is focused on microbanks' performance – the dependent variable. Since microbanks operate in an environment where social as well as financial performance is highlighted (Economist, 2008; Morduch 1999) – we chose to address both aspects of performance[3]. Our three main indicators of financial performance (return on assets, operational self-sufficiency, and financial self-sufficiency) attempt to capture the complexity of financial performance within the microfinance industry. Also, as previously argued, most microbanks state a dual mission; being financially sustainable and "serving the poor". Similar to Cull et al. (2007) and Mersland and Strøm (2009), we therefore include average outstanding loan as a proxy to measure to what degree the microbank reach out to poor customers. We also look at the focus on woman (labeled gender) – as this is an indication of their focus on servicing female clients, and finally we capture the relative focus on rural areas (labeled rural). These three indicators need also to be understood in the specific microfinance

3 In an additional unreported model we also control for social performance when regressing financial performance against the independent variables (and visa-a-versa). However, this did not have a significant effect on our results.

context that typically microbanks that offer smaller loans and have a focus on women and rural areas gives an indication that the microbank focuses on the poorest client segments (Bhatt and Tang, 2001). Based on the above discussion, we apply a model of microbank performance that incorporates various dimensions of international influence, microbank specific control variables from past research, and country control variables.

Microbank performance = f (international initiator, international commercial debt, international subsidized debt, international director, international network membership + microbank specific control variables + country control variables)

Hypotheses

We identify four distinct sources of international influence within microbanks; international knowledge access (International initiator), international funds access (international commercial and subsidized debt), international monitoring (international board member), and international affiliation/networks.

Having an international founding agency/firm (initiator) will most likely affect the microbank's ability to access knowledge – both in terms of practices/skills and in terms of hardware. The resource based theory of the firm highlights how organizational specific history is an important source of uniqueness – and potentially competitiveness. Given the scale economy of knowledge and the fact that agency costs are reduced with common ownership (if shareholder owned) or common identity (non-profit) – we expect that microbanks with an international initiator will have higher performance. This performance might take the form of higher financial performance and/or social performance.

Hypothesis 1: There is a positive relation between having an international initiator and microbanks' performance

The corporate governance literature highlights how debt is a powerful disciplining "mechanism" – particularly related to corporations with free cash flow (Jensen, 1986). For microbanks – this is the case when they reach self sufficiency or have excessive funding from

donors. We argue that agency costs are reduced when microbanks have undertaken commercial dept (H2a) – or subsidized debt (H2b). Based on the resource-based theory, we see international debt as an important indicator of a microbank's superior ability to raise capital. Since most of the providers of commercial funding to microfinance pursue a "double bottom line" (Reille and Forster, 2008), we argue that debt has the same kind of effects on social performance as on financial performance. We therefore suggest that both commercial debt and subsidized debt provide stronger monitoring, i.e. lower agency costs, which leads to higher social and/or financial performance.

Hypothesis 2a: There is a positive relation between international commercial debt and microbanks' performance

Hypothesis 2b: There is a positive relation between international subsidized debt and microbanks' performance

Past agency theory-based research suggests that a firm's performance depends on the monitoring and decision-making undertaken by its board of directors (e.g., Schleifer and Vishny, 1997). Furthermore, from a resource-based view, an international board member can provide unique capabilities (such as microbank experience from other countries) and resources (easier to get international funding). Oxelheim and Randøy (2003) found that internationalization of boards of publicly traded firms enhances firm performance – as these international board members facilitate the transfer of value enhancing corporate governance practices. We argue that the same kind of processes can take place in microbanks. International board members might enhance the microbanks' ability to transfer skills and competencies – thus providing better access to unique resources for the microbank – in relation to mere domestic oriented microbanks. Thus, we argue that international board members can reduce agency costs and facilitate higher microbank performance – either as financial performance and/or social performance.

Hypothesis 3: There is a positive relation between international board membership and microbanks' performance

Being a member of a prestigious or recognized international network – such as the Women's World Banking - can be a major step in a microbank's development. We suggest that such a membership provides a quality screening that carries with it the potential for reduced monitoring costs in relation to the microbank's interaction with other organizations. If a microbank "misbehaves" – it could potentially be excluded – such that membership provides a cap on opportunism. For the microbank, this can facilitate cost effective transfers of know-how, technology, and even funds. In relation to the resource-based theory, we argue that an international network membership provides the microbank with unique access to resources and capabilities. Since international networks in microfinance pursue dual objectives (Isern and Cook, 2004), we suggest that the reduced monitoring (agency) costs due to a international network membership can enhance microbank performance – with respect to either or both the financial and the social performance.

Hypothesis 4: There is a positive relation between international affiliation/network membership and microbanks' performance

Control variables

We apply microbank control variables that are typically included in recent microfinance performance research, such as Cull et al (2007) and Mersland and Strøm (2008). We include the following organization-specific (microbank) control variables: microbank experience (years), credit methodology, ownership type, assets (size), regulation, portfolio at risk and average loan (in the financial performance regression). Furthermore, given the high degree of variation in the economic environment of our 73 country sample, we use a number of country variables, similar to Mersland and Strøm (2010), in order to reduce

misspecification of microbanks' performance. This includes the country's inflation, GDP per capita adjusted for purchasing power parity effects, GDP growth rate, current account balance as a percentage of GDP, and the economic freedom index from the Heritage Foundation. Furthermore, we include regional dummies (see Table 1) as well as year dummies in our regressions in order to further streamline the analysis.

Table 1 about here

4. Methodology and Data

The dataset is a collection of 379 microbanks that have been chosen to be assessed by one of the five leading rating agencies specialized in microfinance: MicroRate, Microfinanza, Planet Rating, Crisil and M-Cril. Thus, microbanks' decision to become rated by an international rating agent already indicates that the microbank in this study is internationally oriented. Comparisons of the rating methodologies applied by the five rating agencies reveal no major differences on all applied variables in this study.

The five microfinance rating agencies differ in their emphasis and the extent of provided information. Thus, there are a different number of observations related to different variables. When needed, all entries in the dataset have been annualized and dollarized using official exchange rates at the given time. The rating reports, that represent the basis for the constructed database, are from 2001 to 2008. The data set comprises microbanks from 73 countries. In addition to data from the rating year, we also have up to five additional firm-year observations per microbank prior to the rating year event.

The dataset has a certain sample selection bias, since only *rated* microbanks enter. They represent microbanks with the *intention* to search out international funding and practice microfinance in a business oriented manner. We will argue that using microbanks that are internationally rated has at least four advantages compared to data from commonly used

databases of microbanks, such as Mix-market (www.mixmarket.org). First, raw data (the rating reports) are publicly available at www.ratingfund2.org, second, several more variables, especially variables relevant to the study of corporate governance and internationalization, are available from Ratingfund. Third, the data is not self-reported, as in Mix-market, but collected and verified by a third party (the rating agency). Fourth, a bias towards large microbanks is avoided. Mix-market data includes most of the very large microbanks, whereas the rated microbanks used in this study have a wider distribution in terms of size. Several, but not all, of the largest microbanks in the world do not undertake *microfinance* rating reports because they instead undergo traditional rating from agencies like the Standard & Poor's. The size bias in the Mix-market data, is therefore smaller in our dataset (Table 2). The mean difference between the Mix-market and our rating report mean is, however, moderate (US$ 1026 versus US$ 942), and the median difference is small and reversed (US$ 456 versus US$ 479). Taken together, we suggest that a dataset built on rating reports is more representative for the industry than the Mix-market sample.

Table 2 about there

The rated microbanks we analyze have a number of legal and organizational forms; but three forms stand out: they are non-profit organizations, member-based cooperatives, or shareholder controlled firms with various degrees of profit motivation (Isern et al., 2003). In addition, the universe of microfinance providers consists also of other organizational and legal forms. For example, throughout the world, there are a large number of informal rotating savings and credit associations (ROSCAs) that have been initiated by the poor (Ambec and Treich, 2007, Bouman, 1995) or have been promoted by donors (Allen, 2006). At the same time, it is also common to see government ownership of different types of rural, agriculture, development, and postal banks (Christen et al., 2004). However, none of these institutions are formal private

suppliers of microfinance services with an interest in becoming rated by a third party. Moreover, our approach also implies that we exclude numerous small savings and credit cooperatives, and development programs that offer microcredit solely as a welfare service (non-sustainable). We argue that the 379 microbanks in our dataset represent commercial and professionally oriented institutions that have decided to be publicly rated with the motivation to improve access to funding, benchmark themselves against others, and to increase transparency (see www.ratingfund.org).

5. Empirical Findings

5.1. Descriptive statistics

Table 3 provides descriptive statistics for the variables used in this study.

Table 3 about there

The average financial performance (Return On Assets) of the microbanks is slightly positive, at 0.5%. This reflects that a large number of microbanks are not financially self sufficient, i.e., they do not pay their true cost of capital. However, one needs to pay attention to the ROA standard deviation of 12.5% - which reflects the large variation in financial returns. The operational self-sufficiency (OSS) and the financial self-sufficiency (FSS) give more details. OSS is higher than 1.0, indicating that the microbanks on average are able to meet their obligations, but when adjusted for low-interest loans and inflation in the FSS measure, we see that the surveyed microbanks are not financially sustainable in the long term. International support may cover at least part of the shortfall in necessary income. On the social performance side, the average loan size is US$ 942. A median of US$ 479 and a high standard deviation (US$ 2252) indicate that the average loan's distribution is skewed heavily to the low end (more small loans, but with a long tail at the high end of large loans). The social

performance measures, gender and rural, are both categorical, gender is a dummy and rural has three categories, see table 1. These are only recorded at the rating year, therefore the low number of observations. The percentage of microbanks biasing their loans towards women is 43.8. The rural variable is symmetrically distributed, as about 30% give loans mainly to urban customers, 28% to rural, and the rest to a mixture of the two.

The various performance measures as well as the international explanatory variables may be related, so that regressing on all variables individually really brings no extra benefits. We run a correlation analysis to check if multicollinearity between the international explanatory variables are a concern, and also if the performance measures are duplicates.

Table 4 about there

First, we look at the correlations among the financial performance variables in the two panels. Obviously, since they are all measures of financial returns, the correlations between the financial performance variables in panel A are very high and strongly significant. However, since they measure financial returns differently, with and without subsidies (OSS and FSS) and related to size (ROA,) we include all three measures in the analyses. In contrast, the correlations between the social performance variables in panel A are low and only significant in one case (average loan and gender). Thus, the social performance variables measure different aspects of outreach, and this indicates that social performance is really multi-dimensional. A further noteworthy difference is that the financial performance variables are only related to one explanatory international variable (commercial debt), but that gender is related to several international variables. Last, an interesting difference between panel A and B exists in the fact that commercial debt is positively related to financial performance, but that subsidized debt is positively related to gender. An interpretation is that commercial debt acts to discipline financial management, but that subsidized debt has a stronger bias towards social performance. This could be an example of a trade-off effect between financial and social

performance (Hermes et al. forthcoming; Morduch, 2000). Significant result may, however, change when all variables are run together.

Now we turn to the question of multicollinearity among the international explanatory variables. Significant correlations could indicate a multicollinearity problem. However, the correlation coefficients are rather low. Kennedy (2008, p. 196) holds that correlations need to be in the area of 0.8 to 0.9 to detect collinearity among two variables. None of the correlation coefficients in Table 4 are of this magnitude. However, the method does not detect collinearity among three or more variables. Thus, we may have a collinearity problem for the full set of international variables. Common ways to deal with this are to use data reduction techniques or to run regressions with only one or a few explanatory variables at a time. In this paper, we choose the latter procedure in (unreported) robustness checks. In all, low correlations among the international explanatory variables warrants the inclusion of all in regressions. However, the many significant correlations are a warning signal that multicollinearity problems may arise when all are included simultaneously. We solve this by running different specifications of estimations to check how stable coefficients are.

5.2. Regression methodology

We want to perform single-equation regressions for each financial and social performance variable, and system regressions first for all financial and then for all social performance variables. The regression structure is further complicated by two facts. First, some dependent variables (ROA, OSS, FSS, and average loan) are continuous and some are categorical (rural, and gender). Second, the data is panel data since we have up to six years of observations among the 379 microbanks, and we want to exploit this advantage as well as possible.

Let us look at the single-equation regressions first, and begin with the continuous variables. The single-equation regressions give a way to compare results to past research (e.g.,

Mersland and Strøm, 2009). The financial performance variables and average loan are all continuous variables. Among the international explanatory variables only the share of international directors is continuous, distributed between 0 and 1, and the rest are dummy variables that we assume are also time invariant[4]. Thus, we need to use the random effect model using the generalized least squares (GLS) estimation methodology (Greene, 2008) to implement the regression for the financial performance variables and for average loan. The other social performance variables are categorical. Gender and international initiator are dummy variables, and rural has three categories. For the categorical variables we perform logistic regressions for gender and international initiator, and an ordered logistic regression for the rural variable. Since the assumptions for panel data estimation of logistic regressions are rather stringent (Greene, 2008 p. 796-806) and "…is fraught with difficulties and unconventional estimation problems" in Greene's words, we pool the sample. In the logistic regressions year dummies (Woolridge, 2002) are included in order to reduce time heterogeneity. The single-equation regressions are shown in Tables 5 and 6.

Now we turn to the system regressions. System estimation is applicable when we have related measures of an underlying true variable that depends upon a set of explanatory variables. Table 4 shows that this is the situation here, especially among the social performance variables. Given the high correlation between the financial performance variables, system estimation should be superfluous. Yet, FSS is subsidy adjusted, and may thus give different information. Furthermore, interesting contrasts between the financial and social performance variables appear when both are run as system regressions. We use panel data estimation with the seemingly unrelated regression (SUR) methodology (Greene, 2008 p. 267-272), a procedure that takes account of possible correlations among the dependent variables. To do so, we assume that the categorical dependent variables are continuous. The

[4] The variable is recorded only in the rating year. However, the microbank is not likely to change its policy on outreach from one year to another.

procedure gives the correct sign and significance level, but coefficients cannot be interpreted as in a logistic regression. We perform a Breusch-Pagan test to check if the residuals in the SUR regression are independent, and also an exclusion test that all international variables have zero coefficients.

The correlations in Table 4 show that multicollinearity among the international variables are a potential problem in our regressions. We confront this problem by running several regressions, first regressions where one or a subset of variables are run (not reported) and then a regression containing all variables. In unreported regressions we observe that significant variables' coefficient estimates are similar across regressions, and thus multicollinearity problems are a small concern.

5.3. Econometric findings

Tables 5 and 6 report our findings when each measure of the dependent variable is taken separately. Tables 7 and 8 give results for joint estimations of the dependent variable; with respect to financial performance and social performance. We emphasize the effects shown by the joint estimation; however, we will first briefly discuss the findings from the single measure tests (Table 5 and 6).

Table 5 shows that having an international initiator is significant and positively affecting ROA and OSS, but does not significantly affect FSS. Thus, being initiated by an international organization provides better financial performance. However, when adjusting for subsidies (FSS), the effect vanishes indicating that microbanks that have an international initiator receive more subsidies than other microbanks. We do not see any other systematic effects on these single measures of performance – with only the exception being that international directors significantly reduce OSS. This effect might be explained by the fact that such directors bring in a culture of higher costs (Mersland and Strøm, 2009).

Table 5 about there

Table 6 reveals that microbanks' internationalization significantly affects social performance with respect to gender bias (international initiator, international subsidized debt, and international network membership) and rural focus (international network membership). Thus, being internationally initiated tends to increase the microbank's bias in preferring women as customers. Internationally subsidized loan have the same effect. Last, being an international network member has two significant effects upon outreach. The variable indicates that outreach decreases with the rural market variable, and increases again with gender bias.

Table 6 about there

Now we turn to Table 7, that shows the financial variables when all measures of financial performance are regressed together in a SUR regression. We notice that the same results for both ROA and OSS are obtained in Table 5, that is, being internationally initiated tends to improve financial performance, but results are not significant with respect to subsidy adjusted values (FSS). Having an international director reduces financial performance.

Table 7 about there

In Table 8 we run the three social performance variables together in a SUR regression. In contrast to Table 7, we now obtain several more significant results – and we argue that a joint estimation is also more theoretically correct – as we capture the joint effect on performance. Thus, while the financial performance measures used in this study are mostly uni-dimensional (similar results in Tables 5 and 7), the indicators we use for social

performance are multi-dimensional (different results in Tables 6 and 8) and must be analyzed together in order to evaluate a microbank's social returns. This suggests that microbanks with an international director tend to have smaller average loans, that is, social performance (or outreach) is increased. Being internationally initiated has conflicting results for social performance, in that outreach is reduced for the rural market regression, but outreach is increased for gender bias. This is a result we show in Table 6 as well. International commercial and subsidized debts both promote outreach to the rural market, as well as subsidized debt for gender bias. Last, being a member of an international network reduces the microbank's presence in the rural market.

The contrast between Table 7 and Table 8 is further underlined by the summary statistics at the bottom of each table. We see that the financial performance variables have high correlations in residuals and that the Breusch-Pagan test of independence shows rejection at a high significance level. The high correlations imply that little is gained by running these regressions together - over and beyond what single dependent variable regressions provide. One financial performance variable is a close substitute for another. This is not the case for the social performance variables. They have low correlations, but the Breusch-Pagan test rejects independence between the variables. This means that they should be run together, so that the SUR regressions can take account of the interdependence between the social performance variables. Furthermore, we see that an F-test of importance of the international variables for performance is rejected for the financial performance variables, but not for the social. Thus, international influence variables play a fundamentally different role for the financial and the social performance variables.

5.4. Discussion

What can we learn from these results? First of all, we interpret the results as an indicator that international influence (typically from the developed economies) is more concerned about the social performance than the financial performance of microbanks. These results are particularly interesting in relation to the microfinance schism debate in the industry (Morduch 2000). Specifically, some argue that a more profit seeking microfinance industry is better able to serve the poorest members of the community, since their profit motive leads them to be more efficient and more willing to seek out new markets for their loan products (Christen and Drake, 2002; Rhyne 1998). Others argue that a more commercialized microbank will drift away from the poor customer segment (Woller et al. 1999; Woller 2002). Even when most microbanks struggle to become self sufficient and often depend on donor support (Microbanking Bulletin, 2007), the international influence seems to enhance social over financial returns. These results are also stable across for-profit and non-profit microbanks (not reported). Recent evidence presented by Hermes et al. (forthcoming) indicates that there is a trade-off between servicing the poorest customers and being financially sustainable. Thus, by focusing more on social returns the international actors are at the same time promoting a less financially sustainable industry. International subsidies over the longer term might thus be needed.

The empirical tests reveal that an international initiator does enhance accounting performance (ROA) and operational self-sufficiency (OSS) – as suggested by hypothesis 1. The sign remains positive but is no longer significant when numbers are adjusted for subsidies (using the FSS measure) – thus rejecting hypothesis 1 in relation to financial performance. We argue that is due to easier access to subsidies by microbanks with an international initiator. Furthermore, since the sign remains positive in the FSS regression, it might also be that the historical ties with the initiator may bring along transfer of skills and competencies – in line with arguments from resource based theory. However, no other *positive* significant financial

effect is found from international influence. In fact, there appears to be one significant *negative* effect from international directors – as increased monitoring by an international director apparently reduce operational self sufficiency. This seems to imply that the international director does show up as a cost factor in the microbank (Mersland and Strøm, 2009). Thus, taken together, the results indicate that international influence does not enhance microbanks' financial performance and that some forms of internationalization, like directorship, might actually induce higher costs. This should be a concern for policy makers and international actors.

The findings - that an international initiator enhances *social* performance, increases outreach to women and decreases rural outreach - make practical sense (supporting hypothesis 1 for social performance). Since many of the international actors active in initiating microbanks are concerned with exit strategies, they might be willing to trade off rural outreach (which can be costly) with financial results. Likewise, the positive sign on average loan size supports such a trade-off hypothesis. Also, since servicing women does not bring along additional costs (D'Espallier et al. 2009a) and can enhance repayment (D'Espallier et al. 2009b), it is not surprising that international initiators enhance female outreach.

The finding that international initiators do not enhance rural outreach may have an additional explanation to the trade-off hypothesis. Since initiating a microbank in most cases requires ex-pats and frequent field visits from an international head office, it is more comfortable to provide services in and around urban areas. That membership in an international network likewise reduces rural outreach supports our "comfort" hypothesis, since frequent visits from international experts and supporters are common in these types of microbanks.

The finding that debt holders enhance rural outreach demonstrates that the international community is concerned with rural outreach (supporting hypothesis 2a and 2b for social performance in terms of rural outreach), and to some lenders even exist as a

requirement (www.mixmarket.org). Since providing debt requires no, or little, rural monitoring by an international investor, compared to initiating a microbank or being a member in an international network, an international lender may be more effective in assuring rural outreach.

The reason that subsidized lenders are concerned with female outreach (supporting hypothesis 2a and 2b for social performance in terms of female outreach), is probably because several of these international lenders specifically want microbanks to target female clients (www.mixmarket.org).

Taken together, the empirical tests do not support the notion that commercial debt and subsidized debt enhance financial performance (rejecting hypothesis 2a and 2b – for financial performance). However, we find that both commercial and subsidized debt provide higher social performance – as discussed above. This implies that we need to differentiate between the effects from international debt on social versus financial performance and that international lenders are indeed concerned with the social part of microfinance (Reille and Foster, 2008).

Our tests show that international directorship (from the "global North") has a negative effect on financial performance (but only with respect to operational self sufficiency) – but enhance social performance (reduce average loan size). Thus hypothesis 3 is rejected for financial performance, and partly supported as it relates to social performance. One explanation might be that such board members are more motivated by the social performance – and enhance organizational governance to such ends. Moreover, international directors might bring along a culture of higher costs (Mersland and Strøm, 2009) and their focus on reaching poorer customers increases the microbank's costs (Mersland and Strøm, 2010) and thereby reduces its financial performance.

33% of the microbanks in our sample are members of well known international networks. Our data reveals that such membership enhances social performance (more focus

on women and rural areas) - but not financial performance. Thus hypothesis 4 is rejected as it relates to financial performance, but supported as relates to social performance. We argue that the positive effect on social performance can be attributed to better transfer of knowledge and "best practices", and/or due to better monitoring of management - as poor social performance could potentially exclude the microbank from the network.

6. Conclusion

This study reveals that key dimensions of internationalization affect microbank performance – however – mostly related to their social performance. Our overall conclusion is that more internationally influenced microbanks are performing socially better and financially equal with mere domestic connected microbanks.

This study is of particular importance – as it contradicts a commonly held view in the microfinance industry. It is common to assume that international influence is only a "necessary evil" – and that such influence should only be a stepping stone on the route to an independent domestic market solution. Our interpretation is that microbanks can accrue long term benefits from international involvement. The finding that international influence mostly affects the social performance of the microbank, is of importance in the ongoing schism debate in the industry (Morduch, 2000; Hermes et al., forthcoming) as it indicates that international actors might influence the trade-off between financial and social results. This could bring about a reassessment of the role of international actors. In an industry where most microbanks struggle to become financially viable, international actors are not only needed as social watchdogs. There is certainly a need for influence which can enhance the microbank's financial performance. Further research should address more closely which activities these international actors provide that are able to influence microbanks' performance. Moreover, new research should look further into how local stakeholders can and should balance the twin microfinance goals of social outreach and financial sustainability.

The scope (up to six years of data), breadth (73 countries) and rigor of this study (microbank-specific control variables, multiple country and region controls, as well as control for year effects), make us confident that our results are well founded. We also argue that our hypotheses are supported by agency theory and resource based theory. Besides, bringing in the SUR technique allowing us to measuring the multi-dimensions of social performance simultaneously, is novel in the microfinance literature. There are of course limitations to this study. First, we are using proxies for important variables, such as three measures of social performance – even though all of them – especially average loan size and women outreach - are key performance variables used by major agents (i.e., World Bank). Second, the direction of causation could potentially be reversed (with the exception of the exogenously given international initiator) – as more successful microbanks are able to recruit international board members, hold international debt, or be members of international networks. However, such international network membership normally comes early in a microbank's life – and with few exits – so it can most likely be treated as exogenous. Third, future research could go further into a broader set of indicators of social impact, and finally, this study does not address the underlying processes of *why* internationalization leads to higher performance.

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Table 1: Variables included in the study:

Variables	Explanation/definition	Hypotheses:
	Dependent variables included in the study	
Financial Performance:		
ROA	Operational net income divided on average annual assets and adjusted for country inflation	
OSS	Total operating revenues divided by total administrative and financial expenses.	
FSS	Total operating revenues divided by total administrative and financial expenses, adjusted for donations, low-interest loans and inflation.	
Social Performance:		
Average loan	Average outstanding loan per loan client	
Rural/urban market	Whether or not the microbank focus on only urban (1), rural and urban (2) or only rural areas (3)	
Gender bias	Whether or not the microbank consciously target female clients Yes = 1, No = 0	
Independent variables	**Independent variables included in the study**	
International initiator	Whether or not the microbank was initiated by an international organization Yes = 1, No = 0	+
Member international network	Whether or not microbank is a member of an international microfinance network Yes = 1, No = 0	+
International board members	Number of international board members	+
International commercial debt	Whether or not the microbank holds international commercial debt Yes = 1, No = 0	+
International subsidized debt	Whether or not the microbank holds international subsidized debt Yes = 1, No = 0	+
Microbank control variables	**Microbank level control variables included in the study**	
Microbank experience	The years since the microbank started microfinance operations	
Ownership type	Whether or not the microbank is a shareholder firm (SHF) Yes = 1, No = 0	
Assets	The natural logarithm of the microbank's assets	
Portfolio at Risk	The fraction of the loan portfolio being 30 days or more overdue	
Country variables	**Country level control variables included in the study**	
Heritage Index	The Heritage Foundation index of the yearly economic freedom in the country	
Region Latin America	Countries from Latin America	
Region Africa	Countries from Africa south of Sahara	
Region MENA	Countries from Middle East and North Africa	
Region EECA	Countries from Eastern Europe and Central Asia	
Region Asia	Countries from Asia and the Pacific	

Table 2: Comparing data from Mix-market and rating reports (this data)

	Mix-market (2006) 704 microbanks		Rating reports 379 microbanks	
Variables	**Mean**	**Median**	**Mean**	**Median**
Age (years)	12	9	9	7
Total assets US$	45,566,650	6,169,918	10,536,188	3,076,135
Total staff #	400	94	83	45
# Active loan clients	73564	10102	12,483	4,831
Gross loan portfolio US$	33,072,688	4,438,677	3,976,827	1,727,960
Average outstanding loan US$	1026	456	942	479

Table 3: Descriptive statistics

	Avg.	Std.	Min	Max	Obs
Dependent variables					
Return on assets (ROA)	0.005	0.125	-0.990	0.342	1239
Operational self-sufficiency (OSS)	1.131	0.379	0.076	2.949	754
Financial Self-sufficiency (FSS)	0.936	0.307	0.064	2.210	735
Average loan (US$)	942	2252	2.490	28694	1234
Rural/urban market	1.981	0.767	1.000	3.000	366
Gender bias	0.438	0.497	0.000	1.000	372
International dimensions:					
International initiator	0.377	0.485	0.000	1.000	288
International commercial debt	0.406	0.491	0.000	1.000	257
International subsidised debt	0.514	0.500	0.000	1.000	257
International director	0.558	1.201	0.000	6.000	217
International network member	0.328	0.471	0.000	1.000	290
Microbank specific control variables:					
Microbank experience	9.163	7.329	-2.000	79.000	999
SHF (ownership type)	0.284	0.452	0.000	1.000	289
Assets (size)	14.879	1.365	9.856	19.337	977
Portfolio at risk (30 days)	0.068	0.102	0.000	0.980	910
Country control variables:					
Latin America	0.327	0.469	0.000	1.000	290
Africa south	0.234	0.424	0.000	1.000	290
Middle East/Northern Africa	0.083	0.276	0.000	1.000	290
EECA	0.207	0.406	0.000	1.000	290
HDI-country index	0.684	0.120	0.338	0.863	274

Notice that categorical variables have far fewer observations than the continuous. These are assumed constant for the four years of observations for each microbank.

Table 4: Bivariate Pearson correlations among dependent variables and the international explanatory variables. Panel A gives correlations for financial performance variables, panel B for social performance variables. Correlations are performed for case averages. The number of observations are shown below the coefficients. Significant correlations at the 5% level are bold, at the 1% level bold and slanted.

Panel A				International			
	ROA	OSS	FSS	initia-tor	comm debt	subs. debt	dir-ectors
OSS	***0.763***						
	239						
FSS	***0.696***	***0.854***					
	250	231					
Initiator	0.002	0.096	0.008				
	365	245	250				
Comm.debt	**0.126**	0.091	**0.144**	0.060			
	331	239	244	339			
Subs.debt	-0.031	-0.084	-0.080	***0.147***	0.081		
	331	240	244	338	324		
Directors	0.025	-0.067	-0.037	***0.450***	***0.204***	0.062	
	248	199	194	252	234	233	
Network	0.055	0.090	0.050	***0.313***	**0.114**	***0.151***	***0.290***
	366	246	250	375	339	338	253

Panel B				International			
	Avg. loan	Rural	Gender	initia-tor	comm debt	subs. debt	dir-Ectors
Rural	0.005						
	358						
Gender	***-0.190***	-0.037					
	364	360					
Initiator	0.001	0.004	***0.147***				
	368	363	369				
Comm.debt	-0.051	-0.013	-0.095	0.060			
	334	330	336	339			
Subs.debt	-0.013	0.071	***0.148***	***0.147***	0.081		
	333	329	335	338	324		
Directors	-0.036	0.006	-0.030	***0.450***	***0.204***	0.062	
	249	243	248	252	234	233	
Network	-0.064	-0.098	***0.207***	***0.313***	**0.114**	***0.151***	***0.290***
	369	364	370	375	339	338	253

Table 5: Single measures of financial performance as dependent variables: Return on assets (ROA), operational self-sufficiency (OSS), and financial self-sufficiency (FSS)

	Return on Assets	OSS	FSS
Constant	-0.027	1.430***	0.994***
International dimensions:			
International initiator	0.024*	0.116**	0.053
International commercial debt	0.010	-0.006	0.023
International subsidised debt	-0.001	-0.032	0.003
International director	-0.018	-0.279**	-0.125
International network member	-0.003	0.073	0.046
MFI specific control variables:			
MFI experience	0.001	-0.008**	-0.002
SHF (ownership type)	-0.002	-0.034	-0.039
Portfolio at risk (30 days)	-0.077	-0.004	-0.535***
Assets (size)	0.000	0.000**	0.000***
Country control variables:			
Inflation	-0.122***	-0.430**	-0.469***
GDP/cap. PPP adjusted	0.000*	0.000	0.000
GDP growth	-0.030***	-0.041	0.023
Current account	-0.002	-0.022	-0.014
Heritage index	0.000	-0.002	0.001
Latin America	-0.004	0.059	-0.017
Africa south	-0.001	-0.092	-0.084
Middle East/Northern Africa	-0.025	-0.074	-0.024
EECA	-0.013	-0.074	-0.125
Year dummies			
Overall R^2	0.088	0.143	0.216
N	712	585	554

Table 6: Single measures of social performance as dependent variables: Average loan size, main market (rural vs. urban), and gender bias

	Average loan	Gender Bias	Rural
Constant 1	2.986***	-5.985***	-1.027
Constant 2			1.537
International dimensions:			
International initiator	0.283	1.357***	-0.291
International commercial debt	-0.341	-0.493	0.197
International subsidised debt	0.282	0.622*	0.136
International director	-1.222	0.487	0.285
International network member	-0.385	0.699*	-0.663**
MFI specific control variables:			
MFI experience	0.000	-0.029	0.021
SHF (ownership type)	0.580	-2.580***	0.509
Portfolio at risk (30 days)	-1.437*	-1.951	-0.883
Assets (size)	0.018**	0.000**	0.000
Country control variables:			
Inflation	0.199	-0.970	-0.139
GDP/cap. PPP adjusted	0.000**	0.000**	0.000**
GDP growth	-0.341	0.645	0.935
Current account	-0.014	-0.095	0.045
Heritage index	-0.012	0.087***	-0.022
Latin America	-0.774	1.555**	0.589
Africa South	-1.125*	2.186***	1.733***
Middle East/Northern Africa	-0.215	2.291**	1.980**
EECA	-0.165	-0.270	1.932***
Year dummies			
Overall R^2	0.105	0.271	0.125
N	705	710	699

The regression with "Rural" as dependent variable is done with ordered logistic regression, where a higher value indicates a more rural market. The regression with "Gender" as dependent variable is done with logistic regression, where the value of 1 indicates that the MFI has a gender bias in its lending practice. In both regressions year dummies are included.

Table 7: Financial performance: Joint estimation of international influence and control variables. 512 observations.

	ROA	OSS	FSS
Constant	0.016***	1.464***	1.034***
International dimensions:			
International initiator	0.031**	0.125**	0.054
International commercial debt	0.001	-0.008	0.016
International subsidised debt	-0.002	-0.013	0.006
International director	-0.039	-0.242**	-0.118
International network member	-0.003	0.062	0.049
MFI specific control variables:			
MFI experience	0.000	-0.007***	-0.001
SHF (ownership type)	0.007	-0.048	-0.035
Assets (size)	0.001*	0.005***	0.004***
Portfolio at risk (30 days)	-0.088**	-0.187	-0.729***
Country control variables:			
Inflation	-0.067	-0.271	-0.547***
GDP/cap. PPP adjusted	0.003	0.009	0.004
GDP growth	0.020	-0.302	-0.114
Current account	-0.003	-0.013	-0.010
Heritage index	0.000	-0.002	0.001
Latin America	0.019	0.052	-0.004
Africa South	0.013	-0.059	-0.058
Middle East/Northern Africa	0.007	-0.068	0.024
EECA	-0.011	-0.100	-0.122**
Overall R^2	0.157	0.878	0.887
N	512		
Correlations of residuals:	ROA	OSS	
OSS	0.759		
FSS	0.688	0.817	
Breusch-Pagan chi-sq(3)	0.000		
F-test international variables	0.210		

The Breusch-Pagan test is an examination that the dependent variables are independent. A low value rejects the independence hypothesis.

The F-test is an exclusion test of the hypothesis that the international variables as a group have no impact upon the dependent variables. A low value rejects the hypothesis of no impact as a group.

Table 8: Social performance: Joint estimation of international influence and control variables. 512 observations

	Average loan	Rural	Gender
Constant	5.986***	2.394***	-0.607*
International dimensions:			
International initiator	0.354	-0.294***	0.249***
International commercial debt	-0.487	0.165***	-0.047
International subsidised debt	0.433	0.168***	0.110***
International director	-2.330***	0.082	0.026
International network member	-0.348	-0.163**	0.061
MFI specific control variables:			
MFI experience	-0.007	0.004	-0.006*
SHF (ownership type)	1.169**	0.340***	-0.348***
Portfolio at risk (30 days)	0.000***	0.000**	0.000
Assets (size)	-1.184	-0.090	-0.106
Country control variables:			
Inflation	0.342	-0.022	-0.104
GDP/cap. PPP adjusted	-0.134**	0.000**	0.000***
GDP growth	-3.171	0.212	-0.533
Current account	-0.011	0.001	-0.006
Heritage index	-0.032	-0.009**	0.011***
Latin America	-0.923	0.024	0.359***
Africa South	-1.311**	0.300***	0.437***
Middle East/Northern Africa	0.043	0.440***	0.463
EECA	-0.227	0.437***	0.053
Overall R^2	0.194	0.908	0.571
N	512		

Correlations of residuals:	Average loan	Rural
Rural	0.064	
Gender	-0.119	0.047
Breusch-Pagan chi-sq(3)	0.015	
F-test international variables	0.000	